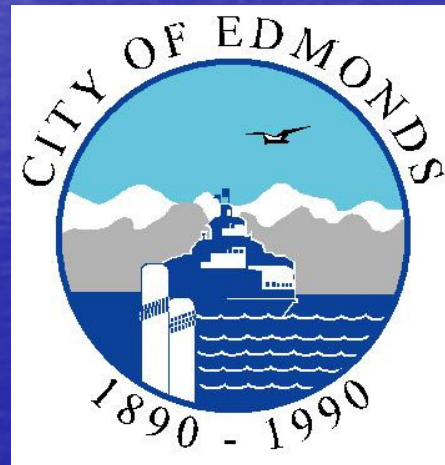


# 238<sup>th</sup> St SW Stormwater Improvements and Infiltration Pipe Replacement (near 107<sup>th</sup> Pl W)

## PUBLIC MEETING



November 15, 2012

# Presentation Outline

- Introduction of Project Team
- Project History & Need
- Area Stormwater Improvements to Date
- Project Design and Schedule
- Your Input
- Questions & Answers

# Introduction of Project Team

- Phil Williams, Public Works and Utilities Director
- Rob English, P.E., City Engineer
- Jerry Shuster P.E., Stormwater Engineering Program Manager
- Michele (Mike) De Lilla, P.E., LEED AP, Senior Utilities Engineer
  - Design is in-house (by City Staff) with geotechnical engineering support from Shannon & Wilson

# Project History & Need

- Early 1980's - Woodway Meadows subdivision built - part of Snohomish County
- December 15, 1995 - City of Edmonds annexed 236 acres from Snohomish County
- 2001 - City commissioned a drainage study for a 300- Acre part of southwest Edmonds including the area annexed in 1995



# Project History & Need

- March 2002 – *Southwest Edmonds Drainage Plan* completed with recommendations for projects to address drainage concerns
- May 2003 – *Stormwater Comprehensive Plan* includes recommendations for projects the *SW Edmonds Drainage Plan* - incorporated into the City's Comprehensive Plan.

# Project History & Need

- 2010 Storm and Surface Water Comprehensive plan included these projects - incorporated into the City's Comprehensive Plan.

*Storm and Surface Water Comprehensive Management Plan—City of Edmonds*

**Table ES-1. Storm and Surface Water CIP Project Plan, 2011-2016.**

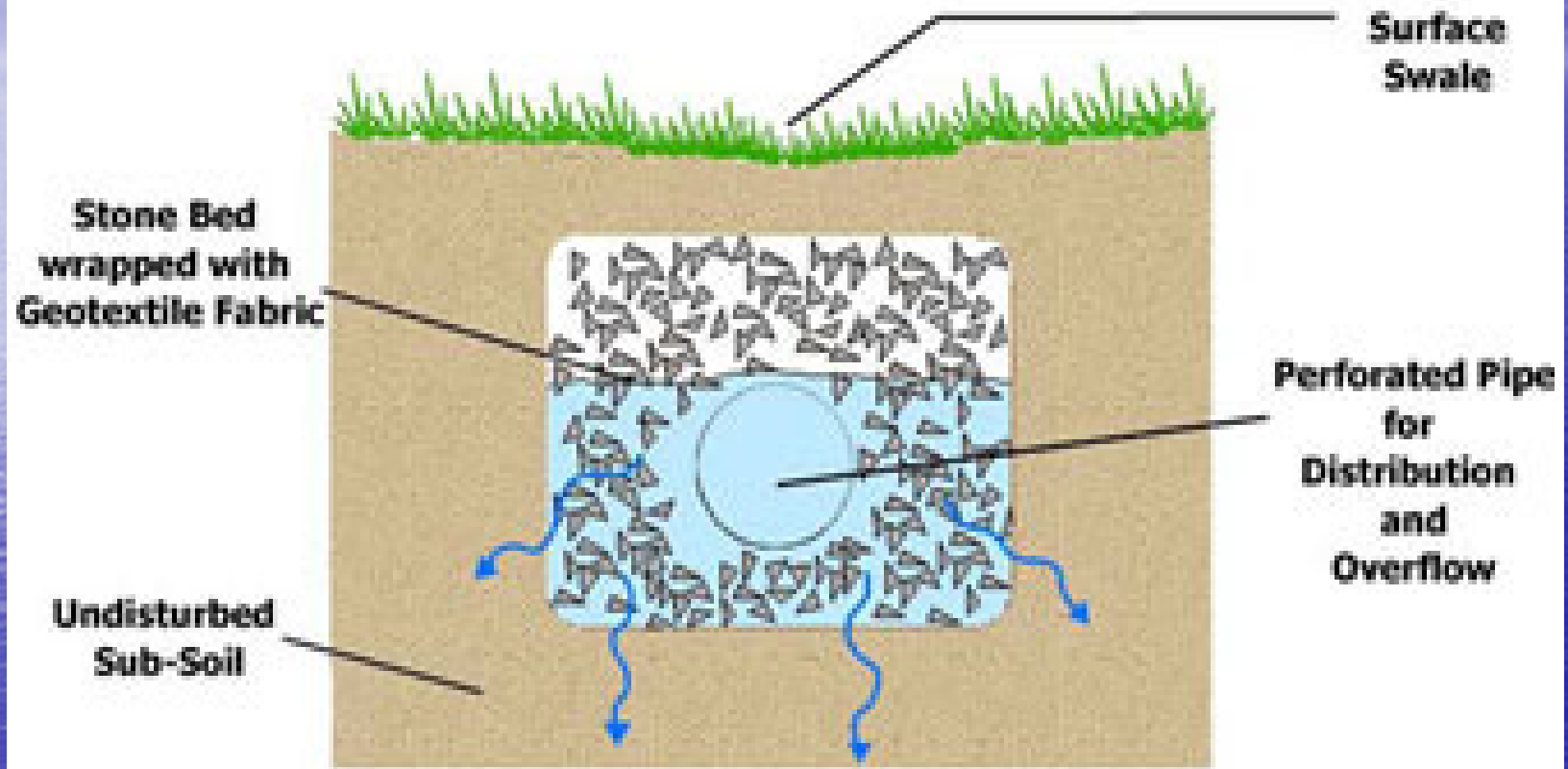
ID #	Project Name	Year <sup>1</sup>						Total Project Cost
		2011	2012	2013	2014	2015	2016	
Tier 1 Projects								
1A	Southwest Edmonds Basin Study Project 1 - Replace Infiltration Pipe (near 107th Pl W.)	\$ -	\$ 27,000	\$ 45,000	\$ -	\$ -	\$ -	\$ 72,000
1B	Southwest Edmonds Basin Study Project 2 - Connect Sumps near Robin Hood Drive	\$ -	\$ -	\$ -	\$ -	\$ 105,000	\$ 441,000	\$ 546,000
1C	Southwest Edmonds Basin Study Project 3 - Connect Sumps on 238th St SW to Hickman Park Infiltration System	\$ -	\$ 105,000	\$ 448,000	\$ -	\$ -	\$ -	\$ 553,000

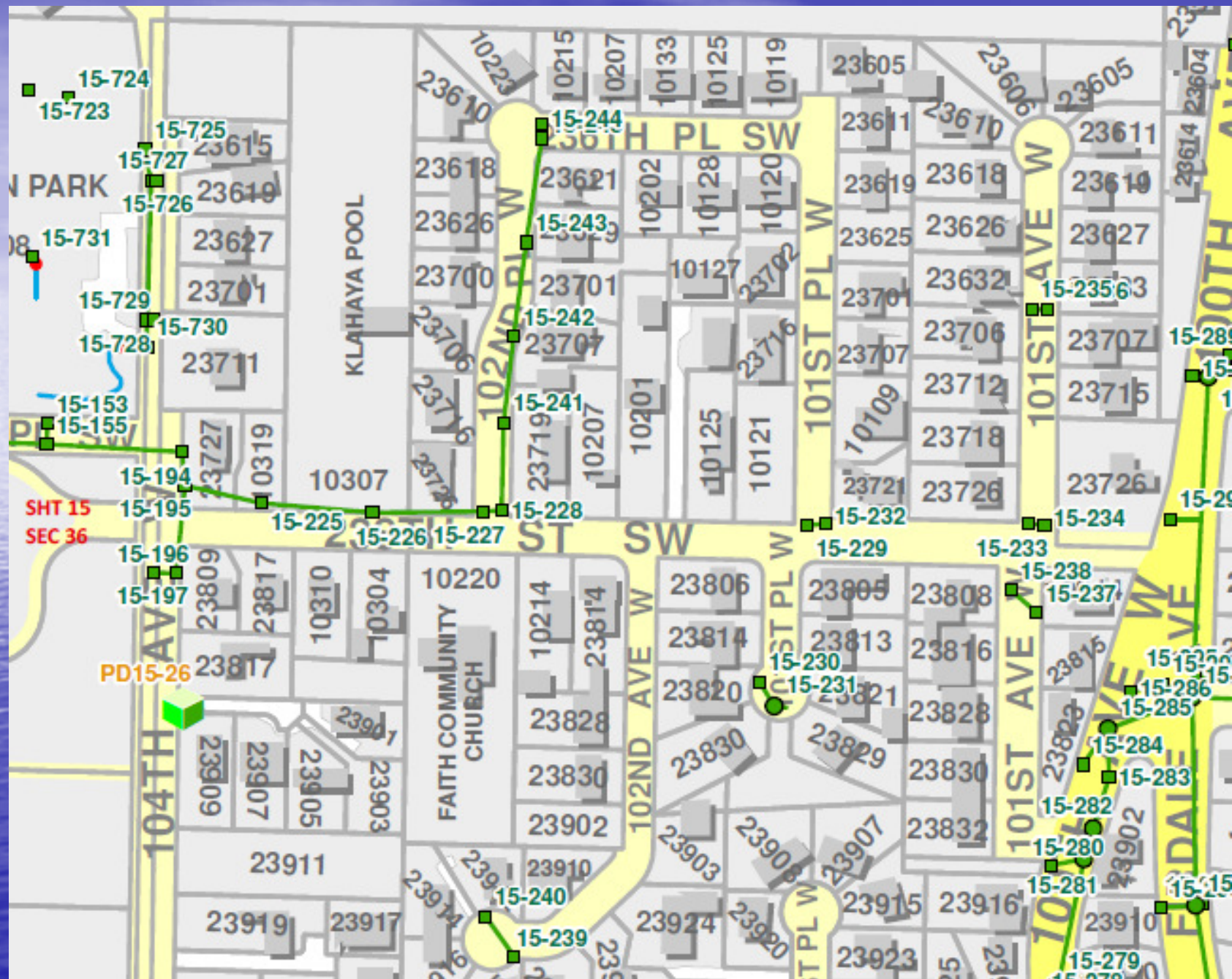
# Area Stormwater Improvements to Date

- 1998 - City adds infiltration system at west end of 237<sup>th</sup> St SW
- 2003 to 2008 - Minor improvement existing stormwater systems
- 2009 – Hickman Park Improvements
  - Rain garden to manage runoff from new parking area & adjacent road (104<sup>th</sup> Ave W.)
  - Region infiltration system is installed per *SW Edmonds Basin Plan*.
    - *Collect runoff from 44-acre area east and north of Park and infiltrate into the porous soils*



# INFILTRATION TRENCH





# Project Design (238<sup>th</sup> Project)



# Project Design Overview

- New piping on 238<sup>th</sup> Ave.
  - Preliminary layout.
  - On south side of road.
  - Pipe will connect/discharge to the existing infiltration system in Hickman Park.

# Project Design Overview

- New piping on 238<sup>th</sup> Ave.
  - Pipe bottom on avg will be about 6 feet deep.
  - Connects to existing basins where possible.
  - Install new Catch Basins in low points that currently have large areas of standing runoff.

# Project Design Overview

- Infiltration systems for 238<sup>th</sup> Project
  - Geotechnical engineer verifying soil characteristics so that they are sized to infiltrate 100year 24hr storm.
  - Install underdrain system near SW corner of church parking lot to infiltrate runoff from this sub-basin that experiences flooding at that location.

# Project Design Overview

- Infiltration systems for 238<sup>th</sup> Project
  - Construct rain gardens in City right of way, east of the Restlawn site.
  - Replace existing infiltration system by gas station and connect to 238<sup>th</sup> pipe.
  - Other infiltration systems within project area will remain as is and be connected to overflow in 238<sup>th</sup> pipe.

# Hickman Park Rain garden



10/29/2012 12:04

# Project Design (238<sup>th</sup> Project)

- Rain garden
  - Match what was done in Hickman Park.
  - Only location in project area where this is feasible.
  - 3 Alternatives
    - All alternatives leave road & paved shoulder as is.

# Rain garden Alternative 1

- Do nothing
  - No rain garden built.
  - Will still need pipes and catch basins in area so that runoff is conveyed to new 238<sup>th</sup> system.

# Proposed Rain garden Site



# Proposed Rain garden Site



# Rain garden Alternative 2

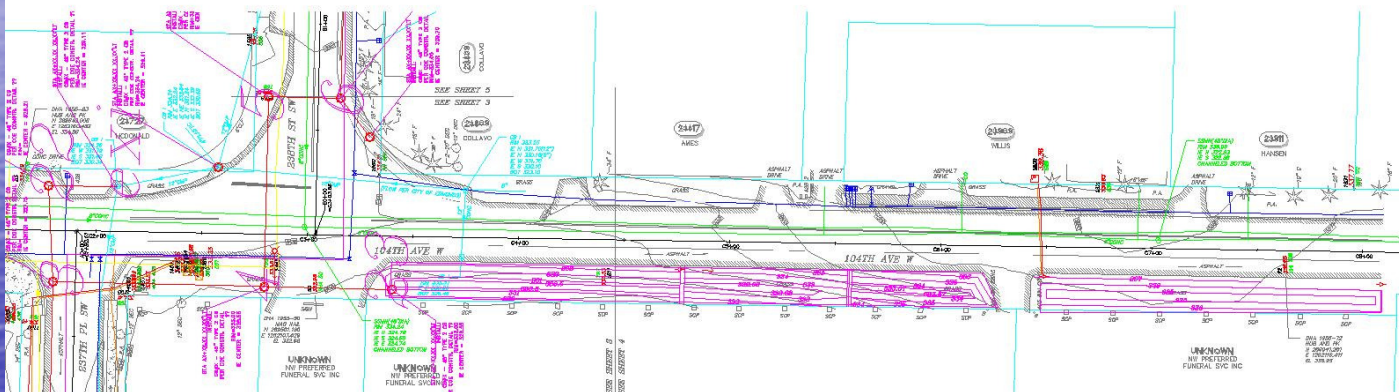
- Grading with minimal steps/flow spreaders
  - All vegetated area is used.

# Example of Grade Steps/Spreader



Rain garden photo courtesy of SPU

# Rain garden Alternative 2



# Rain garden Alternative 3

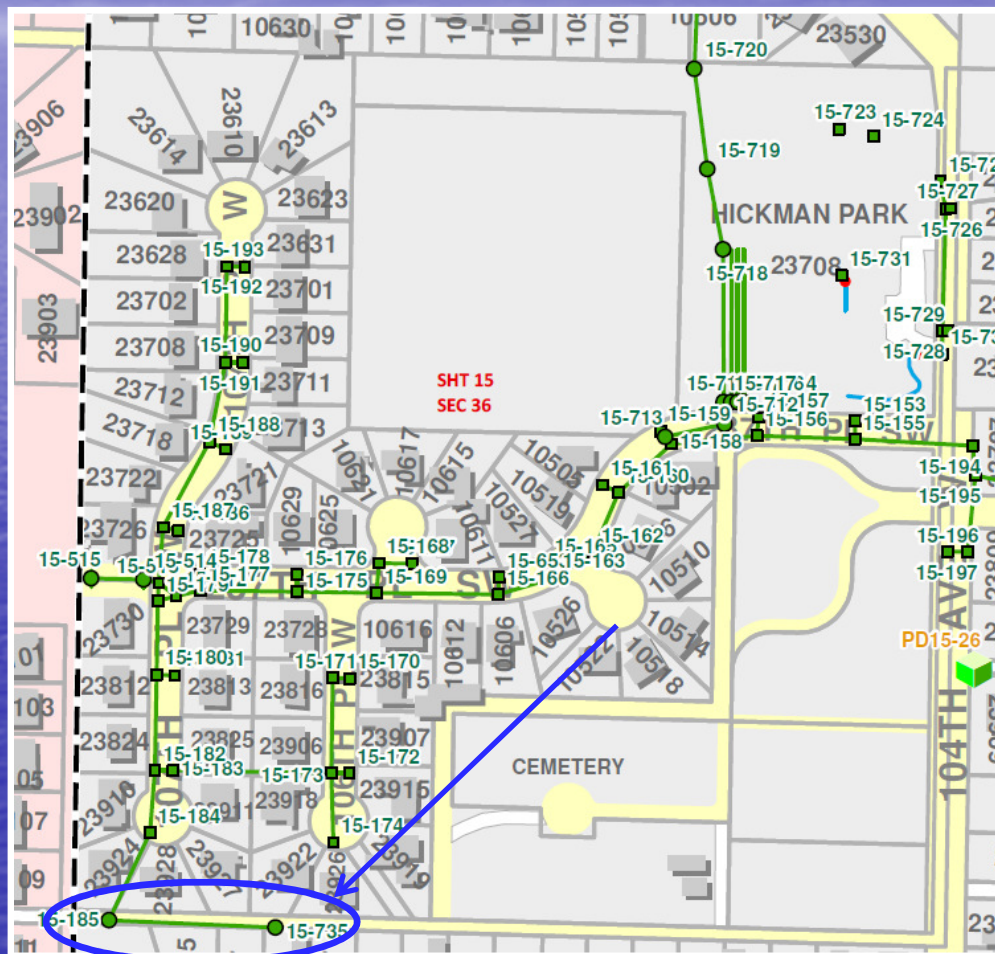
- Grading with additional steps/flow spreaders
  - Allows for a 2' path that would be between the paved shoulder and rain garden.
  - Additional space to be provided wherever poles/physical obstructions exist.



# Project Design (Alley)

- Remove and replace existing infiltration system.
- Geotechnical engineer verifying soil characteristics so that infiltration system can be sized to infiltrate the basin's runoff 100yr 24hr storm.

# Woodway Meadows Storm System (Existing Condition)



# Project Design (Alley)

DHA 2026-89  
SURFACE MON  
N 289034.278  
E 1260937.638  
EL 315.55

DHA 2026-87  
MAG NAIL  
N 288881.504  
E 1260849.386  
EL 315.76

29

# Tentative Project Schedule

- Predesign Phase Complete by Nov/Dec 2012
- SEPA permit submittal Nov/Dec 2012
- Design Phase & SEPA compliance Complete by March 2013
- Bidding & Award April/May 2013
- Construction start June 2013
- Construction end Oct/Nov 2013

# Your Input

**CITY OF EDMONDS SOUTHWEST BASINS STUDY PROJECTS**  
**PROJECT 1A – REPLACE INFILTRATION PIPE (NEAR 107<sup>TH</sup> PL W.) AND**  
**PROJECT 1C – 238<sup>TH</sup> ST SW TO HICKMAN PARK**

If you know of a specific stormwater problem in the project area, we would like to know more about it. Please complete this form and return it to one of the addresses at the bottom or the page.

PROBLEM LOCATION (nearest address, cross streets or landmarks) \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

PROBLEM TYPE (check one or more):

- |  |   |
|--|---|
| <input type="checkbox"/> Standing Water      | <input type="checkbox"/> Pavement Undermined                      |
| <input type="checkbox"/> Structure Flooding  | <input type="checkbox"/> Sedimentation/Deposits                   |
| <input type="checkbox"/> Debris/Obstruction  | <input type="checkbox"/> Needs Maintenance                        |
| <input type="checkbox"/> Slope Slide/Erosion | <input type="checkbox"/> Water quality problem (oil/grease/other) |
| <input type="checkbox"/> Other: _____        |   |

SPECIFIC PROBLEM DESCRIPTION \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (use back of form if you need more space)

OTHER COMMENTS \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

YOUR NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

DAYTIME PHONE/E-MAIL \_\_\_\_\_

PLEASE MAIL FORM TO:

Jerry Shuster, P.E.  
City of Edmonds-Engineering Division  
121 5<sup>th</sup> Ave N.  
Edmonds WA, 98020

OR

E-MAIL THE INFORMATION TO:

shuster@ci.edmonds.wa.us

# Questions?

